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ABSTRACT

This document combines two annual reports on the Colorado Vocational Act for 1990 and 1991. Both reports contain the following materials: (1) a letter from the president; (2) information and fact sheet; (3) definitions; and statistical data on the following: (4) enrollment and placement trends, 1987-1990; (5) Colorado vocational and other educational enrollment percentages for 1989-90 secondary programs; (6) enrollment and costs by program area; (7) enrollment and financial highlights; (8) placement percentages of completers of vocational education; (9) agriculture education; (10) business education; (11) consumer and homemaking education; (12) health occupations education; (13) marketing education; (14) multioccupational cooperative education; (15) special cooperative education (1990); (16) alternative cooperative education (1991); (17) technical trades and industry education; (18) wage-earning home economics occupations, food service, and early childhood education; and (19) appropriations for the Colorado Vocational Act from fiscal year (FY) 1971-72 to FY 1989-90. Numerous graphs and figures are included. (NLA)

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COLORADO VOCATIONAL ACT

TWENTIETH AND
TWENTY-FIRST ANNUAL
REPORTS

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Twentieth Annual Report

Colorado Vocational Act

1990

COLORADO COMMUNITY COLLEGE & OCCUPATIONAL EDUCATION SYSTEM

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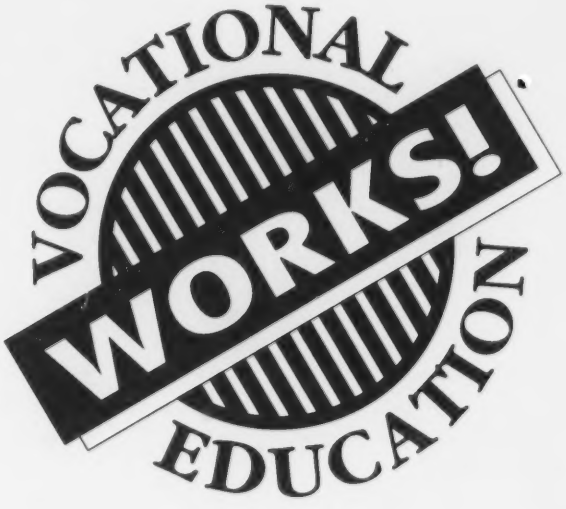

Twentieth Annual Report

COLORADO COMMUNITY COLLEGE & OCCUPATIONAL EDUCATION SYSTEM

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A LETTER FROM THE PRESIDENT

This publication presents the basic accountability information concerning vocational education in the public school districts of Colorado in the 1989-90 school year. The report is in compliance with the State Assistance for Vocational Education Act (commonly known as the Colorado Vocational Act) of 1970 as revised.

The General Assembly provided $13,966,918 in FY 89-90 to assist 147 school districts and 19 other institutions (e.g., community colleges) in funding 1,026 secondary vocational education programs. A primary objective of the Colorado Community College and Occupational Education System (CCCOES) is to insure that, through school districts and private sector cooperation, high quality vocational education programs are available to all secondary students who want, need, and can benefit from such programs.

In 1989-90, more than 38,000 secondary students were enrolled in state approved vocational education programs. Approximately one-third of all secondary students in grades 10 through 12 in Colorado were enrolled in vocational education. Over eighty percent (80.2%) of the students who completed vocational education programs in 1988-89 were employed in jobs directly related to their vocational training or continued their education. The unemployment rate of youth who have completed a vocational education program in Colorado (4.6%) is about one-third the rate of youth (16-21) in general (14.2%).

The vocational education programs offered through Colorado's high schools are an important part of the comprehensive delivery system of vocational education in the state. These programs are fundamental to the economic vitality and future development of local communities and the State of Colorado. In addition, these programs make a vital contribution to the majority of students who go to work upon graduation from high school.

Your comments on this publication are solicited.

Jerome F. Wartgow
President

INFORMATION AND FACT SHEET

CVA FACTS

The twentieth Annual Report is submitted to the Colorado General Assembly in compliance with the Colorado Vocational Education Act of 1970. This act provides State funds to assist local school districts in providing vocational education programs. Vocational education is charged with preparing people for jobs and further education.

During the 89-90 school year, the General Assembly appropriated $13,966,918 for the Colorado Vocational Act. The entitlements for school districts under the Act were greater than the appropriations; therefore it was necessary to prorate the reimbursement to each district to approximately 78 percent of its entitlement.

COLORADO FACTS

In Colorado high schools during 1989-90, over 38,000 students were enrolled in vocational education programs which were approved and supported under the authority of the Colorado Vocational Act.

The number of programs funded in 1989-90 under the Colorado Vocational Act was 1,026.

Colorado Vocational Act programs are offered in 260 high schools and other attendance centers within 147 school districts and 19 other institutions throughout the state.

Statistics for 1989-90 Colorado Vocational Act programs indicate that 80 percent of high school vocational education graduates either obtained a job related to their training or continued their education.

Of the over 38,000 students in CVA approved programs, 24 percent were identified as disadvantaged and 6 percent as handicapped.

Minority students represent 26 percent of the enrollment in programs under the Colorado Vocational Act. Comparison percentages of minority representation are 16 percent in the Colorado general population and 19 percent of the 1989 Colorado high school graduate class.

NATIONAL FACTS

From now until the year 2000, the labor force will grow at an annual rate of only 1 percent, the lowest rate since the 1930s. The resultant strong demand for workers will create unparalleled opportunities for disadvantaged people—minorities, women, the disabled—to enter the economic mainstream (*Preparing the Workforce of the Future*, Elizabeth Dole, 1989, in the *Vocational Education Journal*).

Today's labor force does not meet our current needs, and our needs are increasing as technological change accelerates. *Workforce 2000* projects that the jobs of the early twenty-first century will be very different from the jobs of today, requiring substantially higher skills in a broad array of jobs (*Investing in People*, U.S. Department of Labor, 1989).

Each year, additional workers with literacy deficiencies enter the workforce; one in ten of our 17-year-olds is functionally illiterate. One-half of all 18-year-olds have failed to master basic language, mathematics, and analytic skills. Employers report difficulty both in hiring skilled workers and in finding entry-level applicants who can read and compute well enough to participate usefully in employer-provided training programs (*Investing in People*, U.S. Department of Labor, 1989).

COLORADO OPPORTUNITIES

Colorado is in a unique position with its coordinated Community College and Occupational Education System to expand the opportunities for our students to meet the changing workforce needs. Expanded vocational and technical education programs need to be made available in school districts across the state. High school programs that articulate with postsecondary programs are being encouraged. Lower cost, higher quality programs can be the result of modifying curriculum to meet changing workforce needs. Legislative support is needed to help broaden the flexibility of school districts' graduation requirements and to direct funding to programs for students not seeking baccalaureate degrees.

DEFINITIONS

A vocational education program is a sequence of courses which are directly related to the preparation of individuals in paid and unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree. Such programs shall include competency-based applied learning which contributes to a person's academic knowledge, higher order reasoning and problem-solving skills, work attitudes, general employability skills, and the occupational-specific skills necessary for economic independence as a productive and contributing member of society. Such term also includes applied technology education.

A Secondary (high school) vocational student is a student of high school age enrolled in a state approved vocational education program offered through a high school, an area vocational center, or a community college.

Employed related means employed in an occupation in which the skills required for entry level employment are directly related to the vocational training program.

Employed unrelated means employed in an occupation in which the skills required for entry level employment are not directly related to the vocational training program.

Full-time equivalent (FTE) is one student attending six hours per day for 180 days.

In the Labor Force includes students who are employed related, employed unrelated, and unemployed.

Unemployed means not currently employed and seeking employment.

Continuing education means pursuing additional academic or vocational education at either the secondary or postsecondary level.

Other means not in the labor force (includes deceased, disabled, or ill) and not continuing education.

Completer is a student who has finished all the courses in a vocational education program.

Partial Completer is a student who has finished more than 50% of a vocational education program and is no longer enrolled in the program.

ENROLLMENT AND PLACEMENT TRENDS

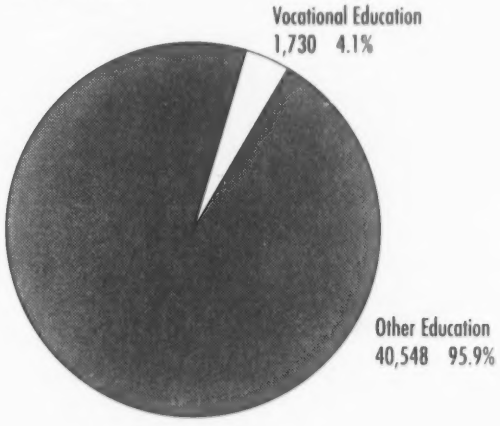
The three years of data reported indicate that vocational enrollments, as a proportion of total 10-12th grade secondary enrollments, are stable at about one-third. In the 12th grade, as students approach graduation and anticipate entering the labor force, participation in vocational programs is greater than 50 percent. The majority of vocational programs are one-year or two-year programs. A notable exception is agricultural production which is a four-year program accounting for the 9th grade enrollments.

Over the last three years, for those students in the labor force, the percentage obtaining jobs has remained relatively consistent at about 95 percent. In the 1990 "Student Follow Up Study of 1989 Vocational Completers," 72.7 percent of those students seeking jobs obtained positions in fields *related to their vocational training*. The comparable figures for 1988 and 1989 are 72.0 percent and 78.0 percent, respectively.

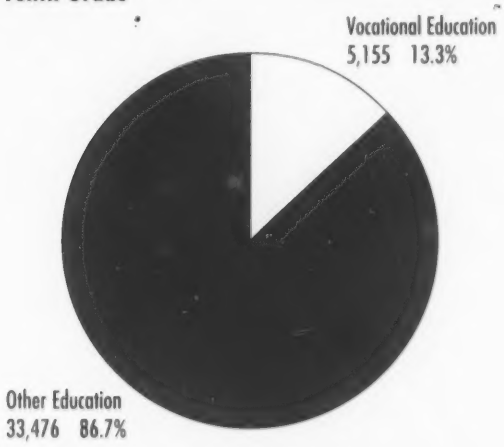
Vocational Education Program Area	1987-88		1988-89		1989-90	
	Enrollment	Percent Employed	Enrollment	Percent Employed	Enrollment	Percent Employed
AGRICULTURE EDUCATION	2,235	92	2,103	93	2,057	96
BUSINESS EDUCATION	13,906	93	12,899	94	11,581	95
CONSUMER and HOMEMAKING EDUCATION	9,187	96	9,129	98	8,609	97
HEALTH OCCUPATIONS	503	91	470	95	421	94
MARKETING EDUCATION	5,091	97	4,704	95	4,653	97
MULTI-OCCUPATIONAL COOP EDUCATION	257	95	295	97	362	94
SPECIAL COOPERATIVE EDUCATION	1,966	93	2,127	92	2,340	94
TECHNICAL EDUCATION	1,203	92	1,229	95	947	93
TRADES and INDUSTRIAL EDUCATION	7,006	93	6,746	94	5,576	95
WAGE EARNING HOME ECONOMICS EDUCATION	1,927	95	1,967	95	1,572	92
TOTAL VOCATIONAL ENROLLMENTS	43,281	94	41,669	95	38,118	95
TOTAL SECONDARY (10-12) ENROLLMENTS	123,126		115,821		110,820	
PERCENTAGE OF SECONDARY (10-12) STUDENTS ENROLLED IN CVA PROGRAMS		33.7		33.9		32.8

COLORADO VOCATIONAL & OTHER EDUCATION ENROLLMENT PERCENTAGES FOR 1989-90 SECONDARY PROGRAMS

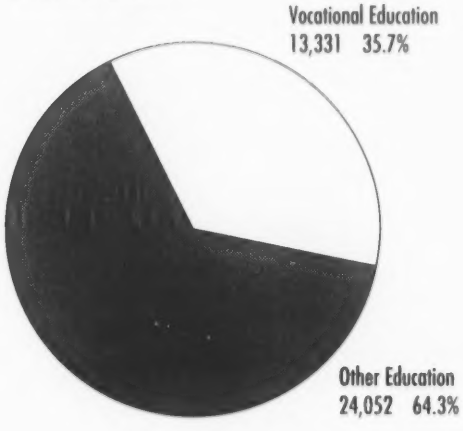
Ninth Grade



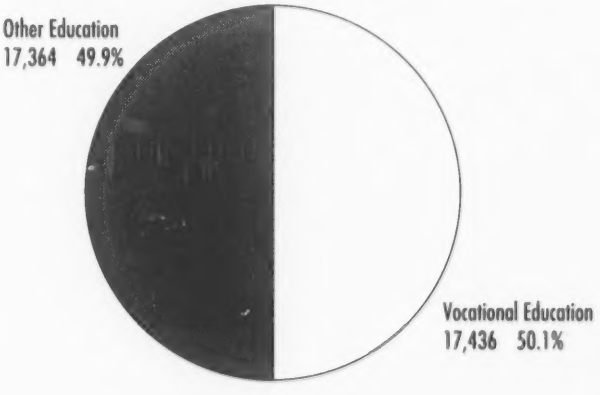
Tenth Grade



Eleventh Grade



Twelfth Grade



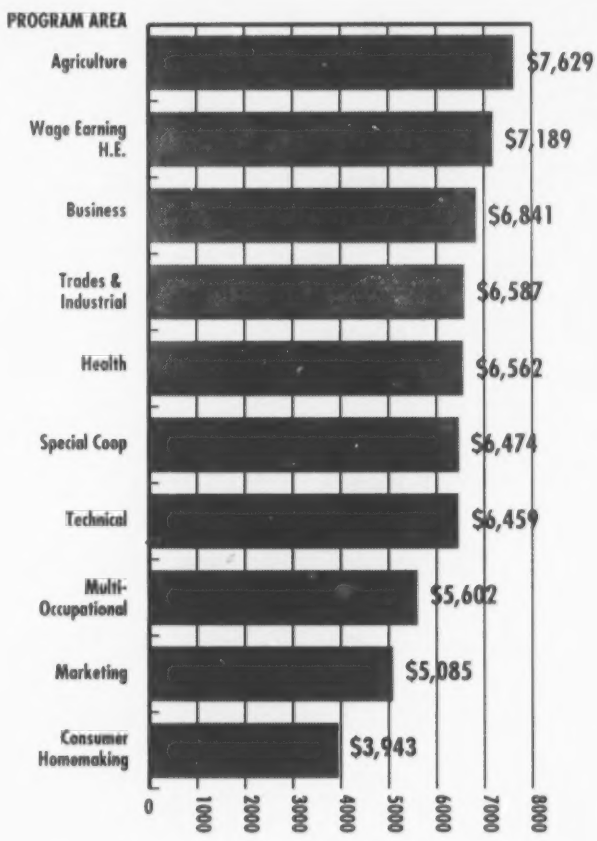
ENROLLMENT AND COSTS BY PROGRAM AREA

Figure 1 indicates that almost four-fifths (79.8%) of the vocational enrollment is concentrated in four program areas: Business, Consumer and Homemaking, Trades and Industrial, and Marketing. Consumer and Homemaking and Marketing are the program areas with the lowest average FTE costs, while Agriculture and Wage Earning Home Economics have the highest average FTE costs. (See Figure 2)

Figure 1.

1989-90 Colorado Secondary Vocational Enrollment Percentages by Program Area

Figure 2.



1989-90 Colorado Secondary Vocational Program Cost Per FTE by Program Area

ENROLLMENT AND FINANCIAL HIGHLIGHTS

Vocational Education Program Area	Enrollments	FTE* Enrollments	Total Costs of Programs ($)	Average Cost Per FTE
AGRICULTURAL EDUCATION	2,057	475.20	$3,625,468	$7,629
BUSINESS EDUCATION	11,581	2,299.48	$15,730,343	$6,841
CONSUMER and HOMEMAKING EDUCATION	8,609	982.66	$3,875,079	$3,943
HEALTH OCCUPATIONS EDUCATION	421	151.67	$999,118	$6,587
MARKETING EDUCATION	4,653	763.98	$3,885,097	$5,085
MULTI-OCCUPATIONAL COOP EDUCATION	362	60.16	$337,019	$5,602
SPECIAL COOPERATIVE EDUCATION	2,340	321.94	$2,084,183	$6,474
TECHNICAL EDUCATION	947	341.31	$2,204,453	$6,459
TRADES and INDUSTRIAL EDUCATION	5,576	1,996.88	$13,103,681	$6,562
WAGE EARNING HOME ECONOMICS EDUCATION	1,572	358.04	$2,574,127	$7,189
TOTALS	38,118	7,751.32	$48,418,568	$6,246
Local Vocational Administration and Student Placement Personnel			$2,416,077	
GRAND TOTAL	38,118	7,751.32	$50,834,645	$6,558

** A full time equivalent student (FTE) is one student attending six hours a day for 180 days.*

PLACEMENT PERCENTAGES OF COMPLETERS OF VOCATIONAL EDUCATION

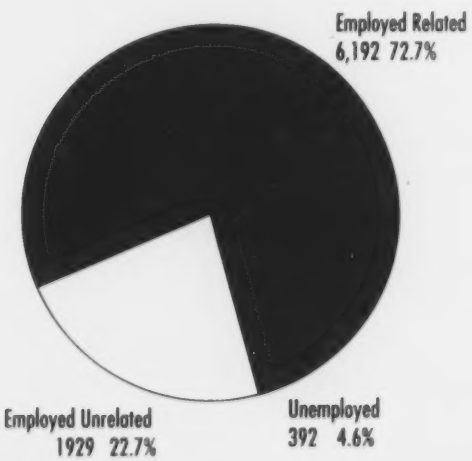
The aggregate placement rates for all vocational education programs operated under the Colorado Vocational Act reflect the effectiveness of these programs in terms of secured employment. Of those students contacted who completed a secondary vocational education program, 37.5 percent were employed in a job related to their training; 11.7 percent were employed in a job unrelated to their training and 2.4 percent were unemployed. An additional 42.8 percent of the students contacted indicated they were continuing their education and 5.8 percent were neither in school or in the labor force (e.g., due to health status, by choice, etc.).

Figure 1

Follow-up Status of Colorado 1989 Secondary Education Program Completers and Partial Completers (N=19,374. 2,839 unknowns were excluded from the chart.)

The chart below reflects placement rates for those seeking employment. Over 95 percent of those seeking employment found a job, while the unemployment rate was 4.6 percent, considerably below the general youth (ages 16-21) unemployment rate of 14.2 percent in Colorado. Overall, an impressive 73 percent were employed in jobs related to their training, compared to 78 percent in 1988.

Figure 2



Follow-up Status of Colorado 1989 Secondary Education Program Completers and Partial Completers Seeking Employment. (N=8,513)

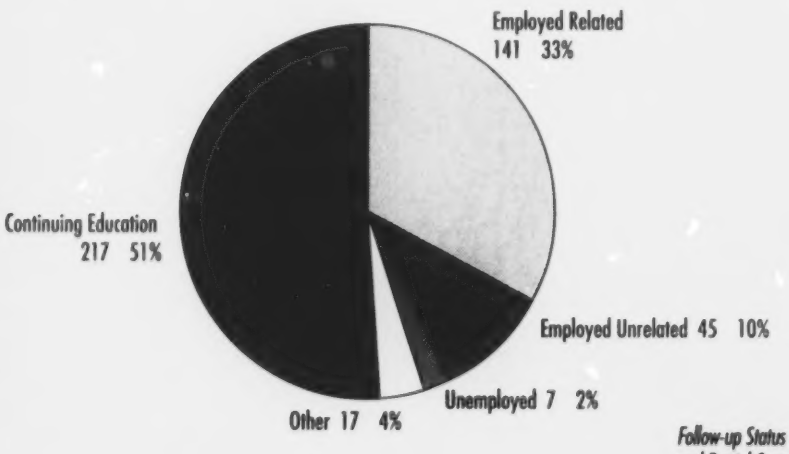
AGRICULTURE

AGRICULTURE EDUCATION consists of training in agriculture occupations, including production agriculture, supplies and services, mechanics, ornamental horticulture, forestry, and agricultural resources. Production agriculture and ornamental horticulture are the two primary programs offered at the secondary school level, while the other areas are integrated into these programs. An increasing emphasis is being given to farm and ranch management and agribusiness. Vocational agricultural education is usually a four-year program in Colorado high schools. Of the total high school students, 1.3 percent are involved in vocational agricultural education. This is comparable to 3 percent of the labor force engaged in agriculture in Colorado. Colorado is the 13th largest agricultural state in the nation, outranked in the west only by California. Ninety-six percent of those seeking employment found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	2,235	2,103	2,057
COMPLETERS	378	399	377
FTE ENROLLMENT	488.50	472.37	475.20
NUMBER OF PROGRAMS	80	79	79
TOTAL COST OF PROGRAMS	$3,260,363	$3,355,534	$3,625,468
COST PER FTE	$6,674	$7,104	$7,629

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Production Agriculture	73	1,901	402.82	$2,993,840	$7,432
Ornamental Horticulture	6	156	72.38	$631,628	$8,727

Figure 1



Follow-up Status of Colorado 1989 Secondary Agricultural Education Program Completers and Partial Completers. (N=456. 29 unknowns were excluded from the chart).

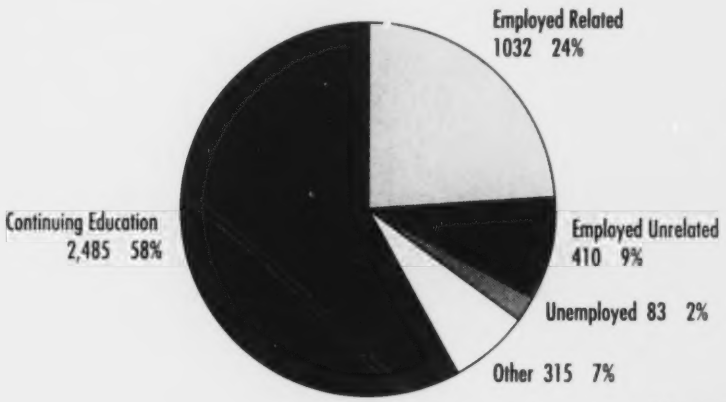
BUSINESS

BUSINESS EDUCATION is the largest vocational program area in Colorado with consistently high enrollments in the areas of clerical, secretarial, accounting, data processing, and management training. The curriculum in business education follows a flexible program concept. Several occupational options are included under the secondary core program providing opportunities that are related to student interests and job market demands. Colorado is a major center for business, finance, government, and corporate headquarters, with a high number of positions in the office occupations area. For all business education programs, 95 percent of those seeking employment found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	13,906	12,899	11,581
COMPLETERS	4,005	3,610	3,478
FTE ENROLLMENT	2,799.70	2,457.38	2,299.48
NUMBER OF PROGRAMS	229	232	224
TOTAL COST OF PROGRAMS	$14,761,217	$15,553,250	$15,730,343
COST PER FTE	$5,272	$6,329	$6,841

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Accounting, Bookkeeping	4	63	37.35	$222,331	$5,953
Bus. Admin. Support	2	37	5.52	$18,747	$3,396
Clerical	4	103	19.88	$109,934	$5,530
Data Processing/ Info. Processing	7	224	65.26	$507,295	$7,773
Secretarial & Related	207	11,154	2,171.47	$14,872,036	$6,849

Figure 1



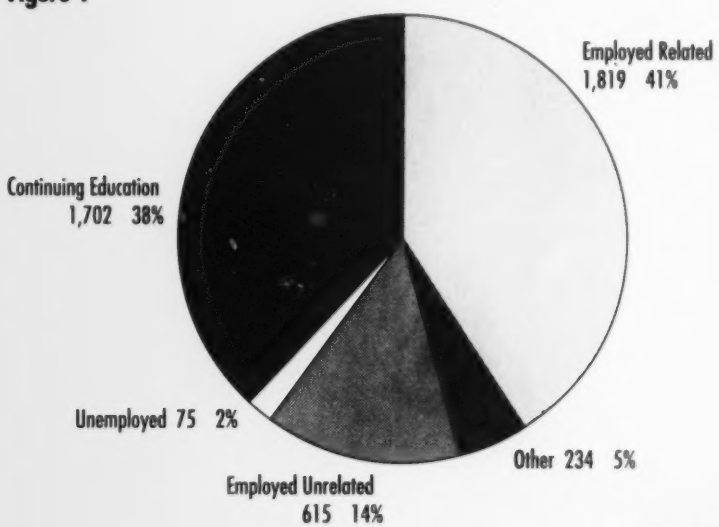
Follow-up Status of Colorado 1989 Secondary Business Education Program Completers and Partial Completers. (N=5,151. 826 unknowns were excluded from the chart.)

CONSUMER AND HOMEMAKING EDUCATION

The CONSUMER and HOMEMAKING program is designed to equip students with entry-level skills needed for the occupation of homemaker. This program is based upon a job analysis study of the Colorado homemaker. Instruction focuses on four skills: caring for and improving the self, meeting the needs of the family, managing resources, and providing a living environment.

	1987-88	1988-89	1989-90
ENROLLMENT	9,187	9,129	8,609
COMPLETERS	3,158	3,581	3,228
FTE ENROLLMENT	1,004.75	1,038.65	982.66
NUMBER OF PROGRAMS	166	161	166
TOTAL COST OF PROGRAMS	$3,106,752	$3,474,687	$3,875,079
COST PER FTE	$3,092	$3,345	$3,943

Figure 1



Follow-up Status of Colorado 1989 Secondary Consumer and Homemaking Occupations Program Completers and Partial Completers. (N= 5,071. 626 unknowns were excluded from the chart.)

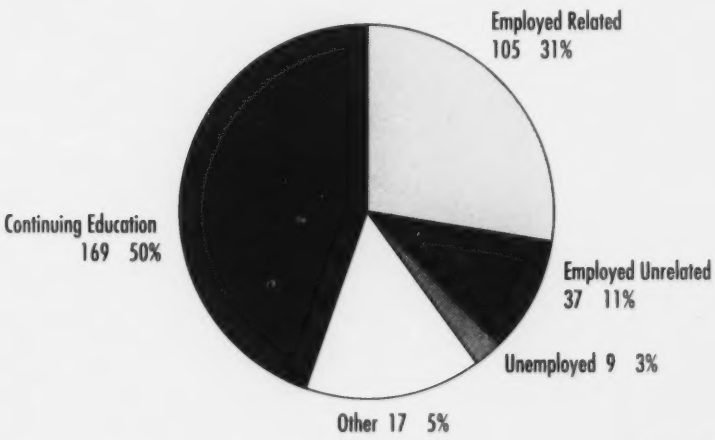
HEALTH OCCUPATIONS

HEALTH OCCUPATIONS EDUCATION has undergone a transition as the number of geriatric patients has increased and as technology has increasingly interfaced with this area of human services. The health team is still the basic component of our medical and dental care systems. Health occupations education trains students for over 40 different health occupations. Among those offered at the secondary level are nurse assistant/orderly, home health aide, medical office aide, physical therapy aide, veterinary aide, and dental aide. Aides in the health occupations work not only in hospitals, doctor's offices, and dental offices, but also in nursing homes, patients' homes, public health departments, clinics and medical laboratories. The demand for health care personnel in Colorado has exceeded the supply of personnel, especially in rural areas of the state. Ninety-four percent of those seeking employment found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	503	471	421
COMPLETERS	312	332	285
FTE ENROLLMENT	186.37	167.65	151.67
NUMBER OF PROGRAMS	28	28	28
TOTAL COST OF PROGRAMS	$1,190,786	$1,058,394	$999,118
COST PER FTE	$6,389	$6,313	$6,587

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Allied Health	13	258	82.44	$524,393	$6,361
Dental Assistant	7	80	33.75	$267,502	$7,926
Medical Assisting	2	3	1.33	$7,874	5,920
Nursing Asst	4	26	10.49	$66,549	$6,344
Ophthalmic Services	1	9	4.53	$20,622	$4,552
Physical Therapy Aide	1	45	19.13	$112,178	$5,864

Figure 1



Follow-up Status of Colorado 1989 Secondary Health Occupations Program Completers and Partial Completers. (N= 382. 45 unknowns were excluded from the chart.)

MARKETING

MARKETING EDUCATION is a cooperative vocational education program in which schools and employers combine to develop competent workers in marketing and distribution of goods and services. The program offers opportunities to gain first-hand experience in fashion merchandising, advertising, general marketing, finance and credit, travel and tourism, transportation, distribution, and international marketing including merchandising and sales in these areas. The more diverse opportunities are in the urban areas but the job demand for marketing occupations is statewide. This vocational education program is vital to Colorado's wholesale, retail, and service-based economy. Of those seeking employment, 97 percent found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	5,091	4,704	4,653
COMPLETERS	1,871	1,680	1,732
FTE ENROLLMENT	802.51	924.22	763.98
NUMBER OF PROGRAMS	76	77	80
TOTAL COST OF PROGRAMS	$3,277,947	$3,569,645	$3,885,097
COST PER FTE	$4,085	$3,862	$5,085

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Marketing Education	76	4,610	744.09	$3,705,854	$4,980
Marketing Management	2	13	6.60	$38,516	$5,836
Tourism	1	30	13.29	$107,285	$8,073
Travel Services Marketing	1	0	0	$33,442*	—

** New program start-up costs*

Figure 1

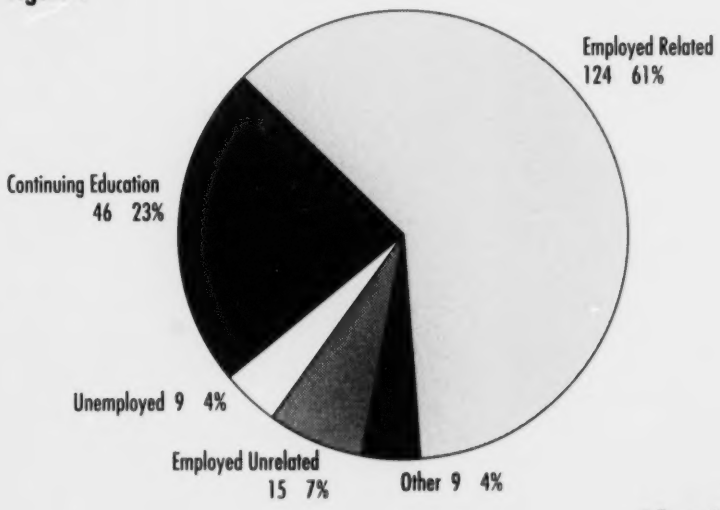
Follow-up Status of Colorado 1989 Secondary Marketing Program Completers and Partial Completers. (N= 2,502. 357 unknowns were excluded from the chart.)

MULTI-OCCUPATIONAL COOPERATIVE EDUCATION

MULTI-OCCUPATIONAL COOPERATIVE EDUCATION programs are cooperative vocational education programs which offer training opportunities in a diversified range of occupations. The program is offered in small high schools that do not have sufficient enrollment to justify a specialized vocational education program. The range of occupations served through this training vehicle may include agriculture, business, health, home economics, marketing, technical, and trades and industry. Because the program is cooperative in nature, it is responsive to the local economy and job environment of the local area. Those students completing this program who sought employment have experienced a high rate of success in finding employment in jobs related to their training. Ninety-four percent of the multi-occupational students seeking employment found jobs.

	1987-88	1988-89	1989-90
ENROLLMENT	257	295	362
COMPLETERS	136	141	179
FTE ENROLLMENT	50.86	57.35	60.16
NUMBER OF PROGRAMS	12	12	16
TOTAL COST OF PROGRAMS	$275,255	$312,134	$337,019
COST PER FTE	$5,412	$5,443	$5,602

Figure 1



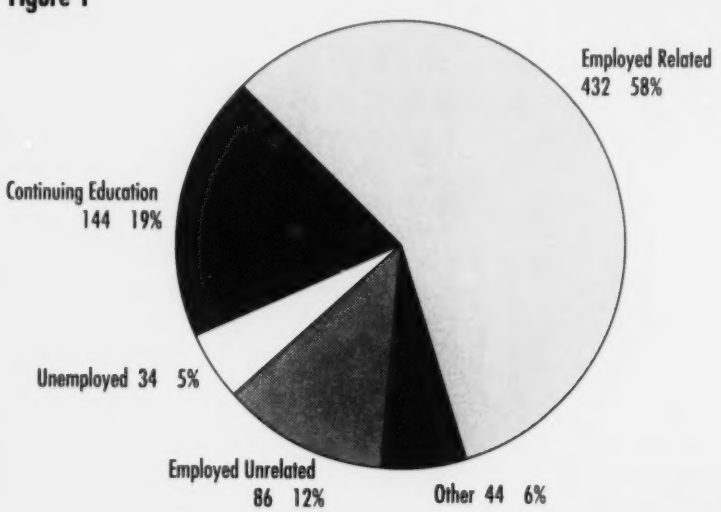
Follow-up Status of Colorado 1989 Secondary Multi-Occupational Program Completers and Partial Completers. (N = 224. 21 unknowns were excluded from the chart.)

SPECIAL COOPERATIVE EDUCATION

SPECIAL COOPERATIVE VOCATIONAL EDUCATION is designed to provide disadvantaged and potential or actual dropout students with entry level job skills to enter the Colorado labor force. The program is designed to accommodate the student with special needs. These special programs place students on the job at a pre-determined local business training station, under a training plan agreed upon by the student, employer, parent and coordinator. Related classroom instruction is provided to meet the individual needs of the student. The coordinator of the program works closely with the employer and the student to assure success on the job. Although general youth unemployment statistics are high for these populations, these programs have succeeded in achieving a highly credible job-related employment rate. Of those special cooperative vocational education students who were seeking employment, 94 percent found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	1,966	2,127	2,340
COMPLETERS	550	637	657
FTE ENROLLMENT	294.01	317.47	321.94
NUMBER OF PROGRAMS	42	44	53
TOTAL COST OF PROGRAMS	$1,744,473	$1,704,216	$2,084,183
COST PER FTE	$5,933	$5,368	$6,474

Figure 1



Follow-up Status of Colorado 1989 Secondary Special Cooperative Program Completers and Partial Completers. (N = 956. 216 unknowns were excluded from the chart.)

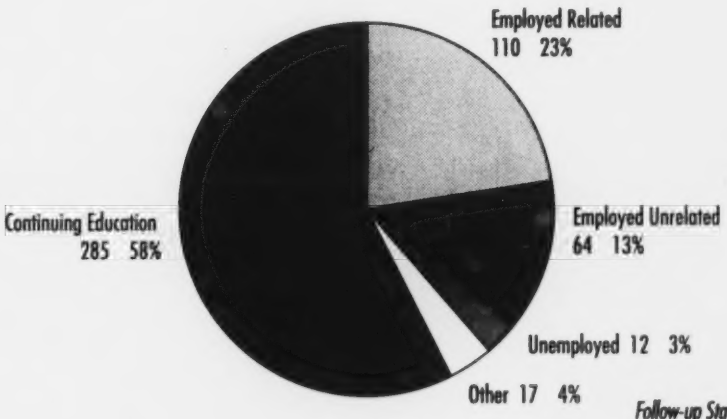
TECHNICAL

TECHNICAL EDUCATION programs provide training in an array of rapidly changing, high technology occupations such as electronics technician and computer-assisted drafting technician. Drafting, electronics, and radio and television repair are the areas of primary emphasis at the secondary level but there are other programs offered in areas where the demand for the particular training exists such as instrumentation technology, radio and TV broadcasting, air conditioning, and heating and refrigeration. These programs support Colorado's high technology industry development. The percentage of technical program completers who are employed related to their training is relatively low because a high proportion of the students enrolled in these programs continue their education at the postsecondary level. Students in technical education programs who were seeking employment had a 93 percent success rate in securing jobs.

	1987-88	1988-89	1989-90
ENROLLMENT	1,203	1,229	947
COMPLETERS	334	382	326
FTE ENROLLMENT	421.58	385.11	341.31
NUMBER OF PROGRAMS	65	64	57
TOTAL COST OF PROGRAMS	$2,454,598	$2,132,654	$2,204,453
COST PER FTE	$5,822	$5,538	$6,459

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Architectural Design & Const.	1	3	1.33	$7,961	$5,986
Air Conditioning	4	15	6.34	$62,243	$9,818
Communications Electronics	7	128	54.63	$317,851	$5,818
Computer Electronics	1	20	7.00	$72,911	$10,416
Criminal Justice	2	49	20.03	$90,460	$4,516
Drafting & Design Technology	16	279	103.83	$760,439	$7,324
Electronic Technology	18	292	98.90	$601,264	$6,080
Engineering Related Technology	6	101	27.86	$153,226	$5,500
Radio/Television Production/ Broadcasting	2	60	21.39	$138,098	$6,456

Figure 1



Follow-up Status of Colorado 1989 Secondary Technical Education Program Completers and Partial Completers. (N = 585. 97 unknowns were excluded from the chart.)

TRADES AND INDUSTRY

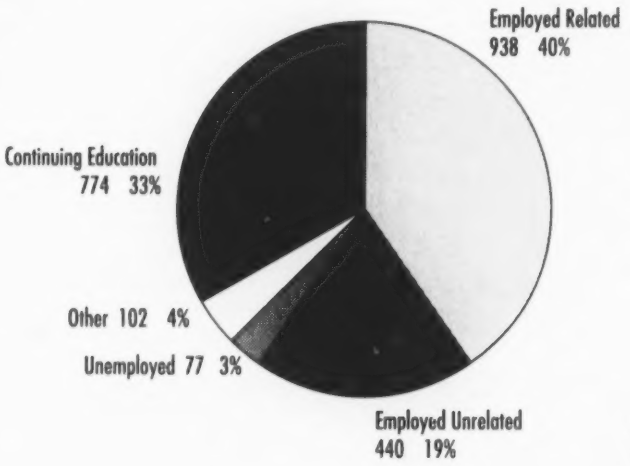
VOCATIONAL TRADES AND INDUSTRIAL EDUCATION has the most diversified program base, offering a broad spectrum of programs tailored to the needs of students and of industry. Students develop manipulative skills, acquire technical knowledge, learn proper safety practices, and utilize facilities and equipment comparable to those in the work place. The programs emphasize realistic training which parallels industry standards and technologic advances. The distribution of jobs in Colorado's labor market indicates that construction, manufacturing, and trades account for 25 percent of the non-agricultural labor force. Since trade and industrial education cuts across many sectors of Colorado's economy, it is vital to the over-all economic development of the state and provides vocational students with a significant advantage in obtaining entry level employment. Close to ninety-five percent of the Trades and Industrial students who were seeking employment found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	7,006	6,746	5,576
COMPLETERS	2,109	1,966	1,752
FTE ENROLLMENT	2,602.09	2,404.44	1,996.88
NUMBER OF PROGRAMS	274	269	262
TOTAL COST OF PROGRAMS	$13,852,184	$13,110,069	$13,103,681
COST PER FTE	$5,323	$5,452	$6,562

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Auto Body and Repair	13	414	162.79	$1,002,386	$6,158
Auto Mechanics	68	1,691	591.40	$3,569,413	$6,036
Cabinetmaking	2	31	9.72	$104,893	$10,791
Carpentry	15	334	113.49	$976,072	$8,601
Commercial Art	6	242	73.16	$505,564	$6,910
Commerical Photograp hy	3	99	29.61	$228,368	$7,713
Construction Trades	23	320	94.33	$650,390	$6,895
Cosmetology	20	544	347.57	$1,476,320	$4,248
Drafting, General	1	4	1.50	$34,173	$22,782*
Electrician	4	23	6.79	$106,639	$15,705*
Electromechanical Instr. Maintenance	3	57	15.99	$238,085	$14,890*
Graphic Printing & Communication	17	319	116.86	$853,050	$7,300
Diesel Mechanics	3	26	17.72	$144,109	$8,133
Industrial Coop Education	18	562	83.73	$603,846	$7,212
Industrial equipment Maintenance & Repair	5	28	8.18	$120,663	$7,798
Major Appliance Repair	2	5	3.02	$11,256	$3,727
Machine Shop	17	260	93.75	$621,906	$6,634
Masonry/ Bricklaying	4	56	22.12	$229,827	$10,390
Mechanics & Repairers, Other	1	12	3.70	$34,960	$9,449
Small Engine Repair	4	66	24.95	$208,629	$8,362
Typesetting	1	4	1.67	$54,360	$32,551*
Upholstery	1	23	9.40	$87,824	$9,343
Vehicle/Mobile Equipment Repair	2	20	13.23	$52,912	$3,999
Welding	29	437	152.20	$1,188,036	$7,806

** High cost programs are closely monitored.*

Figure 1



Follow-up Status of Colorado 1989 Secondary Trade and Industry Program Completers and Partial Completers. (N = 2,755. 424 unknowns were excluded from the chart.)

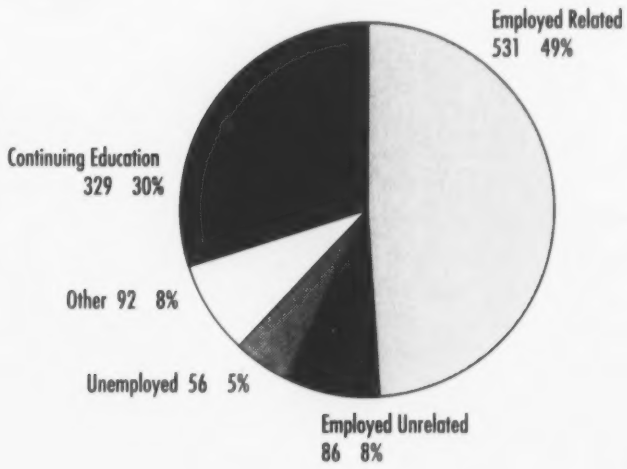
WAGE EARNING HOME ECONOMICS OCCUPATIONS, FOOD SERVICE, AND EARLY CHILDHOOD EDUCATION

HOME ECONOMICS OCCUPATIONS, FOOD SERVICE, AND EARLY CHILDHOOD EDUCATION prepare students for employment in child care, food services, institutional and commercial housekeeping, home furnishings, personal services, and clothing technical services. Inherent in home economics is the commitment to stay abreast of the advancements of technology so that the skills being taught are relevant in today's world. Population growth, rising incomes, and more leisure time have contributed to a growing demand for food service personnel and commercial housekeeping personnel. The percentages of students placed in jobs related to their training in the wage-earning program is impressive, as job demand remains high. With the increase in the number of women entering the workforce or heading single parent households, the demand for child care services has increased. Of those in wage earning home economics who were seeking employment, 94 percent found a job.

	1987-88	1988-89	1989-90
ENROLLMENT	1,927	1,967	1,572
COMPLETERS	813	1,021	725
FTE ENROLLMENT	416.81	434.84	358.04
NUMBER OF PROGRAMS	58	59	61
TOTAL COST OF PROGRAMS	$2,405,194	$2,593,464	$2,574,127
COST PER FTE	$5,770	$5,964	$7,189

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Care & Guidance Mgmt. & Svc.	2	38	13.43	$54,625	$4,067
Child Care Aide	5	143	46.26	$362,732	$7,841
Clothing Apparel Textiles Mgmt & Prod.	1	2	.24	$413	$1,721
Food Management Production Service	14	346	122.67	$954,697	$7,783
Wage Earning Home Economics	37	1,025	171.29	$1,161,090	$6,779

Figure 1



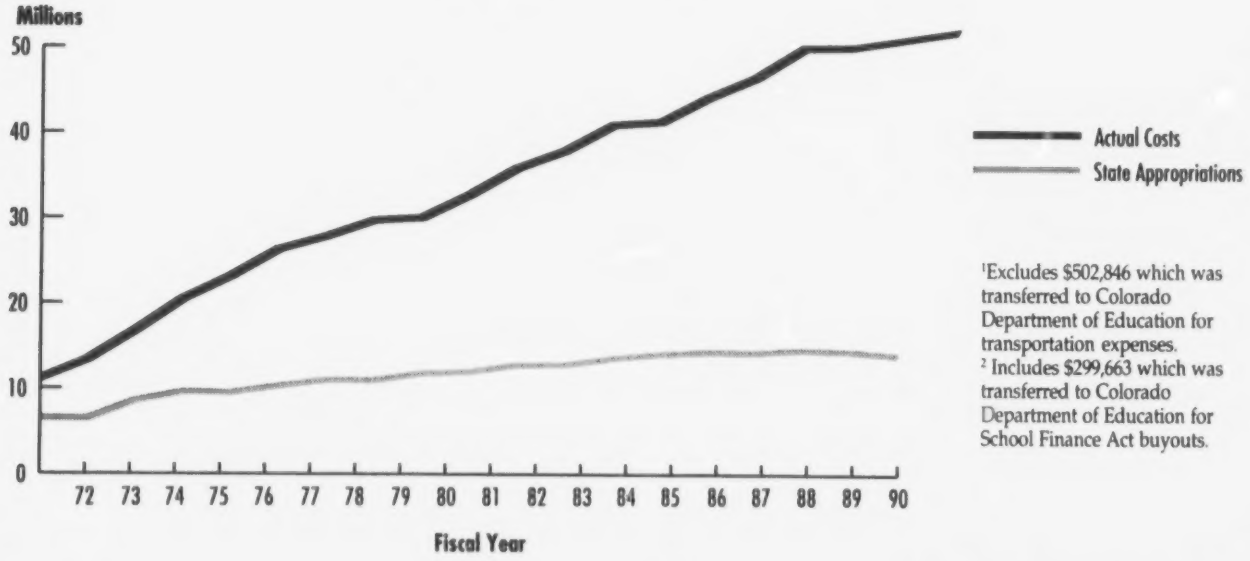
Follow-up Status of Colorado 1989 Secondary Home Economics Occupations Program Completers and Partial Completers. (N = 1,292. 198 unknowns were excluded from the chart.)

APPROPRIATIONS

The Appropriations for the Colorado Vocational Act reflect moderate increases in the fiscal years since 1971. The increases in appropriations, however, have not kept pace with increasing costs of operating vocational education programs. Therefore, the proportion of state support of the total cost of the program operation reflects a steady decline, while the local contribution shows a corresponding increase. In 1989-1990, program operation costs were $50,834,645 compared to the 1988-1989 amount of $49,897,054, a 1.9 percent increase in costs. State support decreased by 0.9 percent.

FISCAL YEAR	CVA ACTUAL COST	STATE SUPPORT FUNDING	PERCENTAGE
1971-72	$11,160,434	$6,500,000	58.24
1972-73	13,391,725	6,500,000	48.54
1973-74	16,788,834	8,600,000	51.22
1974-75	20,475,475	9,620,000	46.98
1975-76	23,132,088	9,538,200	41.23
1976-77	26,289,575	10,303,696	39.19
1977-78	27,784,458	11,004,354	39.61
1978-79	29,677,929	10,997,128	37.05
1979-80	29,965,435	11,766,926	39.27
1980-81	32,651,304	11,966,122	36.65
1981-82	35,808,522	12,768,357	35.66
1982-83	37,817,246	12,788,295	33.79
1983-84	40,822,618	13,560,640	34.01
1984-85	41,209,437	14,053,569	34.10
1985-86	44,070,066	14,323,398	32.50
1986-87	46,404,834	14,279,071	30.76
1987-88	49,837,325	14,565,338	29.23
1988-89	49,897,054	14,399,570[1]	28.86
1989-90	50,834,645	14,266,581[2]	28.12

Figure 1



[1]Excludes $502,846 which was transferred to Colorado Department of Education for transportation expenses.
[2] Includes $299,663 which was transferred to Colorado Department of Education for School Finance Act buyouts.

All data reported in this document pertain to Colorado Vocational Act Programs only.

Sources:

Research and Planning Division, CCCOES

1987-88, 1988-89, 1989-90	Financial System
1987-88, 1988-89	Student Accounting System
1987-88, 1988-89	Follow-up/Placement Report
1988, 1989	Colorado Vocational Act Report

Administrative Support and Technical Service
Colorado Department of Education

Division of Employment Statistics
Colorado Department of Labor

U.S. Department of Labor
Washington, D.C.

This report has been prepared by:

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Research and Planning Division, Colorado Community College and Occupational Education System

Special thanks to Patsy Krechel, CCCOES Public Information Coordinator, for assistance with the final editing and formatting of this report.

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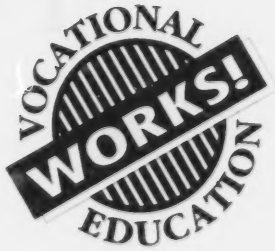
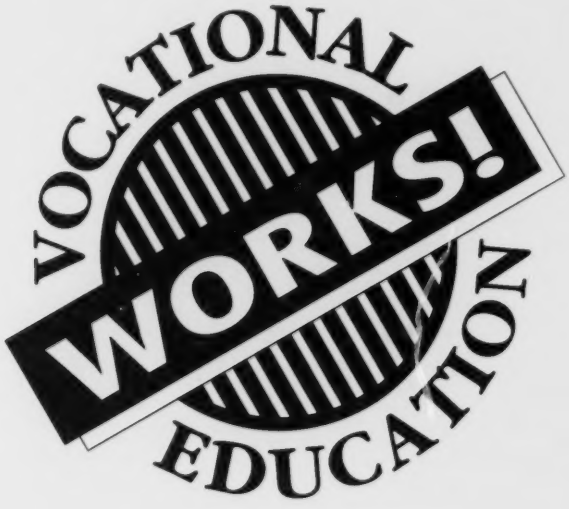
Twenty-First Annual Report

Colorado Vocational Act





Colorado Vocational Act 1991

Twenty-First Annual Report

COLORADO COMMUNITY COLLEGE & OCCUPATIONAL EDUCATION SYSTEM

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A LETTER FROM THE PRESIDENT

This publication presents the basic accountability information concerning vocational education in the public school districts of Colorado in the 1990-91 school year. The report is in compliance with the State Assistance for Vocational Education Act (commonly known as the Colorado Vocational Act) of 1970 as revised.

The General Assembly provided $14,274,855 in FY 90-91 to assist 148 school districts in funding 1,099 secondary vocational education programs offered at the districts and post secondary institutions. A primary objective of the Colorado Community College and Occupational Education System (CCCOES) is to insure that, through school districts and private sector cooperation, high quality vocational education programs are available to all secondary students who want, need, and can benefit from such programs.

In 1990-91, more than 48,000 secondary students were enrolled in state approved vocational education programs. Approximately two-fifths of all secondary students in grades 10 through 12 in Colorado were enrolled in vocational education. Over eighty percent (81.7%) of the students who completed vocational education programs in 1989-90 were employed in jobs directly related to their vocational training or continued their education. The unemployment rate of youth who have completed a vocational education program in Colorado (5.0%) is slightly over one-third the rate of youth (16-21) in general (13.3%).

The vocational education programs offered through Colorado's high schools are an important part of the comprehensive delivery system of vocational education in the state. These programs are fundamental to the economic vitality and future development of local communities and the State of Colorado. In addition, these programs make a vital contribution to the majority of students who go to work upon graduation from high school.

Your comments on this publication are solicited.

Jerome F. Wartgow
President

INFORMATION AND FACT SHEET

CVA FACTS

The Twenty-First Annual Report is submitted to the Colorado General Assembly in compliance with the Colorado Vocational Education Act of 1970. This act provides State funds to assist local school districts in providing vocational education programs. Vocational education is charged with preparing people for jobs and further education.

During the 90-91 school year, the General Assembly appropriated $14,274,855 for the Colorado Vocational Act. The entitlements for school districts under the Act were greater than the appropriations; therefore it was necessary to prorate the reimbursement to each district to approximately 78 percent of its entitlement.

COLORADO FACTS

In Colorado high schools during 1990-91, over 48,000 students were enrolled in vocational education programs which were approved and supported under the authority of the Colorado Vocational Act.

The number of programs funded in 1990-91 under the Colorado Vocational Act was 1,099.

Colorado Vocational Act programs are offered in 265 high schools and other attendance centers within 148 school districts and 20 other institutions throughout the state.

Statistics for 1990-91 Colorado Vocational Act programs indicate that 82 percent of high school vocational education graduates either obtained a job related to their training or continued their education.

Of the over 48,000 students in CVA approved programs, 24 percent were identified as disadvantaged and 9 percent as handicapped.

Minority students represent 27 percent of the enrollment in programs under the Colorado Vocational Act. Comparison percentages of minority representation are 19 percent in the Colorado general population and 20 percent of the 1990 Colorado high school graduate class.

NATIONAL FACTS

From now until the year 2000, the labor force will grow at an annual rate of only 1 percent, the lowest rate since the 1930s. The resultant strong demand for workers will create unparalleled opportunities for disadvantaged people—minorities, women, the disabled—to enter the economic mainstream (*Preparing the Workforce of the Future*, Elizabeth Dole, 1989, in the *Vocational Education Journal*).

Today's labor force does not meet our current needs, and our needs are increasing as technological change accelerates. *Workforce 2000* projects that the jobs of the early twenty-first century will be very different from the jobs of today, requiring substantially higher skills in a broad array of jobs (*Investing in People*, U.S. Department of Labor, 1989).

Each year, additional workers with literacy deficiencies enter the workforce; one in ten of our 17-year-olds is functionally illiterate. One-half of all 18-year-olds have failed to master basic language, mathematics, and analytic skills. Employers report difficulty both in hiring skilled workers and in finding entry-level applicants who can read and compute well enough to participate usefully in employer-provided training programs (*investing in People*, U.S. Department of Labor, 1989).

COLORADO OPPORTUNITIES

Colorado is in a unique position with its coordinated Community College and Occupational Education System to expand the opportunities for our students to meet the changing workforce needs. Expanded vocational and technical education programs need to be made available in school districts across the state. High school programs that articulate with postsecondary programs are being encouraged. Lower cost, higher quality programs can be the result of modifying curriculum to meet changing workforce needs. Legislative support is needed to help broaden the flexibility of school districts' graduation requirements and to direct funding to programs for students not seeking baccalaureate degrees.

DEFINITIONS

A vocational education program is a sequence of courses which are directly related to the preparation of individuals in paid and unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree. Such programs shall include competency-based applied learning which contributes to a person's academic knowledge, higher order reasoning and problem-solving skills, work attitudes, general employability skills, and the occupational-specific skills necessary for economic independence as a productive and contributing member of society. Such term also includes applied technology education.

A Secondary (high school) vocational student is a student of high school age enrolled in a state approved vocational education program offered through a high school, an area vocational center, or a community college.

Employed related means employed in an occupation in which the skills required for entry level employment are directly related to the vocational training program.

Employed unrelated means employed in an occupation in which the skills required for entry level employment are not directly related to the vocational training program.

Full-time equivalent (FTE) is one student attending six hours per day for 180 days.

In the Labor Force includes students who are employed related, employed unrelated, and unemployed.

Unemployed means not currently employed and seeking employment.

Continuing education means pursuing additional academic or vocational education at either the secondary or postsecondary level.

Other means not in the labor force (includes deceased, disabled, or ill) and not continuing education.

Completer is a student who has finished all the courses in a vocational education program.

Partial Completer is a student who has finished more than 50% of a vocational education program and is no longer enrolled in the program.

ENROLLMENT AND PLACEMENT TRENDS

The data reported indicate that vocational enrollments, as a proportion of total 10-12th grade secondary enrollments, are about two-fifths. In the 12th grade, as students approach graduation and anticipate entering the labor force, participation in vocational programs is greater than 60 percent. The majority of vocational programs are one-year or two-year programs. A notable exception is agricultural production which is a four-year program accounting for the 9th grade enrollments.

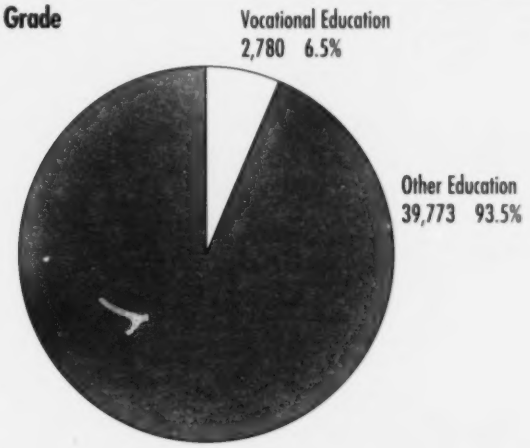
Over the last three years, for those students in the labor force, the percentage obtaining jobs has remained relatively consistent at about 95 percent. In the 1991 "Student Follow Up Study of 1990 Vocational Completers," 74.3 percent of those students seeking jobs obtained positions in fields *related to their vocational training*. The comparable figures for 1989 and 1990 are 78.0 percent and 73.0 percent, respectively.

Vocational Education Program Area	1988-89		1989-90		1990-91	
	Enrollment	Percent Employed	Enrollment	Percent Employed	Enrollment	Percent Employed
AGRICULTURE EDUCATION	2,103	93	2,057	96	2,427	96
BUSINESS EDUCATION	12,899	94	11,581	95	17,161	93
CONSUMER and HOMEMAKING EDUCATION	9,129	98	8,609	97	10,089	97
HEALTH OCCUPATIONS	470	95	421	94	475	94
MARKETING EDUCATION	4,704	95	4,653	97	5,269	98
MULTI-OCCUPATIONAL COOP EDUCATION	295	97	362	94	453	89
ALTERNATIVE COOPERATIVE EDUCATION (ACE)	2,127	92	2,340	94	4,150	92
TECHNICAL EDUCATION	1,229	95	947	93	1,011	92
TRADES and INDUSTRIAL EDUCATION	6,746	94	5,576	95	5,495	93
WAGE EARNING HOME ECONOMICS EDUCATION	1,967	95	1,572	92	1,662	97
TOTAL VOCATIONAL ENROLLMENTS	41,669	95	38,118	95	48,192*	95
TOTAL SECONDARY (10-12) ENROLLMENTS	115,821		110,820		110,059	
PERCENTAGE OF SECONDARY (10-12) STUDENTS ENROLLED IN CVA PROGRAMS		33.9		32.8		41.0

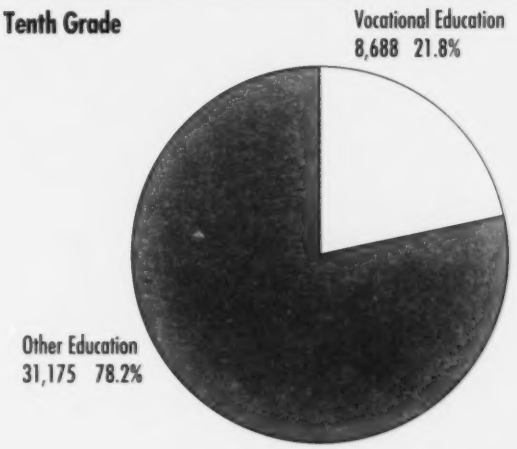
**A portion of the enrollment increase resulted from a change in reporting requirements. Each student enrolled in each class within an approved vocational program is reported.*

COLORADO VOCATIONAL & OTHER EDUCATION ENROLLMENT PERCENTAGES FOR 1990-91 SECONDARY PROGRAMS

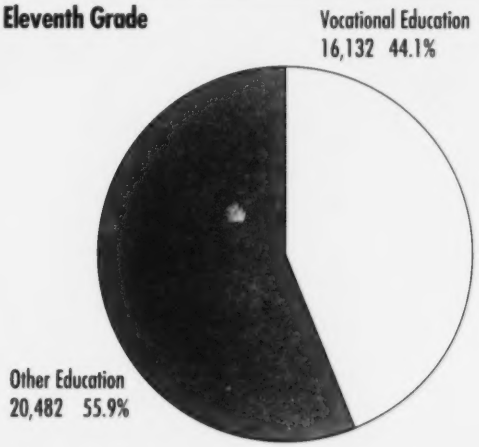
Ninth Grade



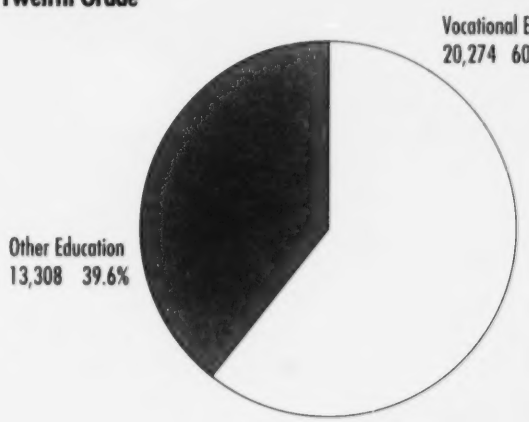
Tenth Grade



Eleventh Grade



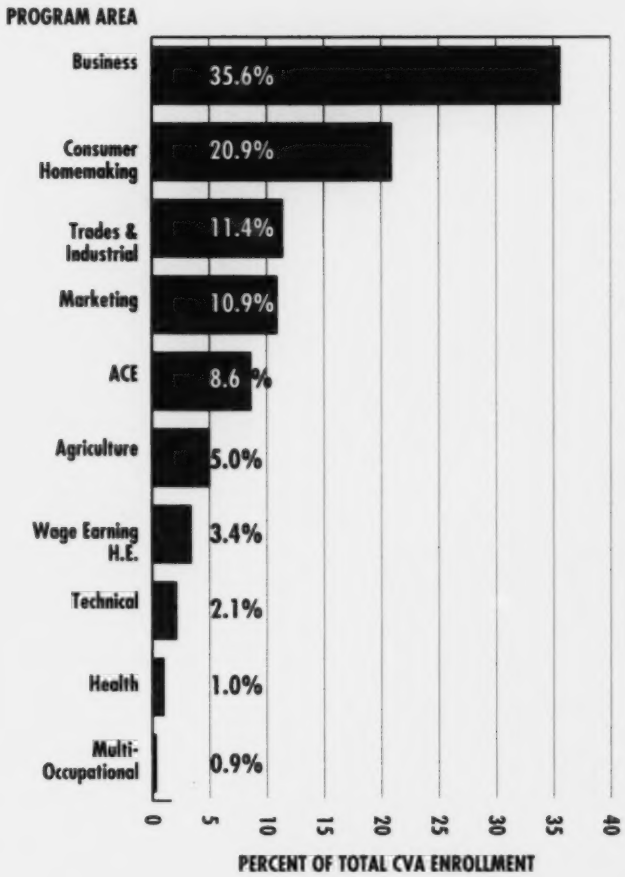
Twelfth Grade



ENROLLMENT AND COSTS BY PROGRAM AREA

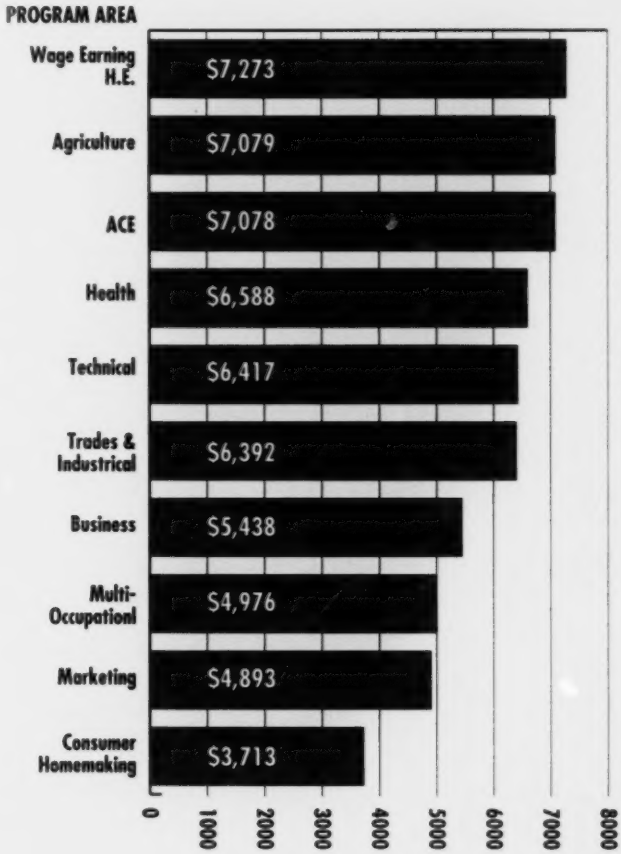
Figure 1 indicates that almost four-fifths (78.8%) of the vocational enrollment is concentrated in four program areas: Business, Consumer and Homemaking, Trades and Industrial, and Marketing. Consumer and Homemaking and Marketing are the program areas with the lowest average FTE costs, while Agriculture, Wage Earning Home Economics, and ACE have the highest average FTE costs. (See Figure 2)

Figure 1



1990-91 Colorado Secondary Vocational Enrollment Percentages by Program Area

Figure 2



1990-91 Colorado Secondary Vocational Program Cost Per FTE by Program Area

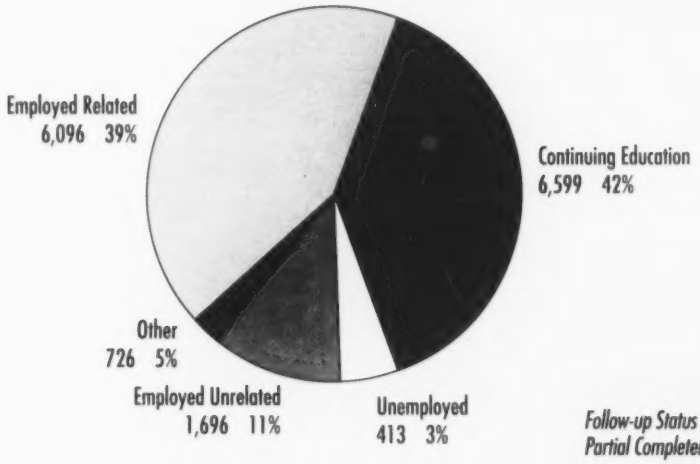
Vocational Education Program Area	Enrollment	FTE* Enrollment	Total Costs of Programs ($)	Average Cost Per FTE
AGRICULTURAL EDUCATION	2,427	556.98	$3,943,030	$7,079
BUSINESS EDUCATION	**17,161**	**2,943.87**	**$16,007,593**	**$5,438**
CONSUMER and HOMEMAKING EDUCATION	10,089	1,125.34	$4,178,752	$3,713
HEALTH OCCUPATIONS EDUCATION	**475**	**178.15**	**$1,173,729**	**$6,588**
MARKETING EDUCATION	5,269	809.66	$3,961,755	$4,893
MULTI-OCCUPATIONAL COOP EDUCATION	**453**	**103.00**	**$512,488**	**$4,976**
ALTERNATIVE COOPERATIVE EDUCATION (ACE)	4,150	461.04	$3,263,392	$7,078
TECHNICAL EDUCATION	**1,011**	**369.85**	**$2,373,334**	**$6,417**
TRADES and INDUSTRIAL EDUCATION	5,495	2,010.78	$12,852,830	$6,392
WAGE EARNING HOME ECONOMICS EDUCATION	**1,662**	**352.75**	**$2,565,532**	**$7,273**
TOTAL	48,192	8,911.42	$50,832,435	$5,704
Local Vocational Administration and Student Placement Personnel			$2,736,471	
GRAND TOTAL	48,192	8,911.42	$53,568,906	$6,011

** A full time equivalent student (FTE) is one student attending six hours a day for 180 days.*

PLACEMENT PERCENTAGES OF COMPLETERS OF VOCATIONAL EDUCATION

The aggregate placement rates for all vocational education programs operated under the Colorado Vocational Act reflect the effectiveness of these programs in terms of secured employment. Of those students contacted who completed a secondary vocational education program, 39.3 percent were employed in a job related to their training; 10.9 percent were employed in a job unrelated to their training and 2.7 percent were unemployed. An additional 42.5 percent of the students contacted indicated they were continuing their education and 4.7 percent were neither in school or in the labor force (e.g., due to health status, by choice, etc.).

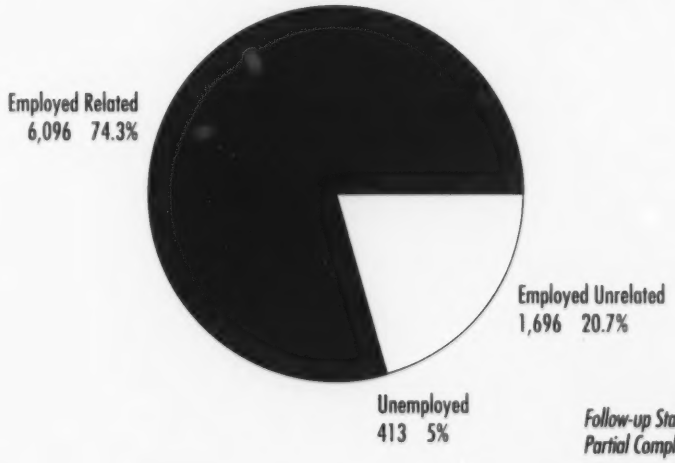
Figure 1



Follow-up Status of Colorado 1990 Secondary Education Program Completers and Partial Completers (N=15,530. 2,247 unknowns were excluded from the chart.)

The chart below reflects placement rates for those seeking employment. Over 95 percent of those seeking employment found a job, while the unemployment rate was 5.0 percent, considerably below the general youth (ages 16-21) unemployment rate of 13.3 percent in Colorado. Overall, an impressive 74 percent were employed in jobs related to their training, compared to 73 percent in 1989.

Figure 2



Follow-up Status of Colorado 1990 Secondary Education Program Completers and Partial Completers Seeking Employment. (N=8,205)

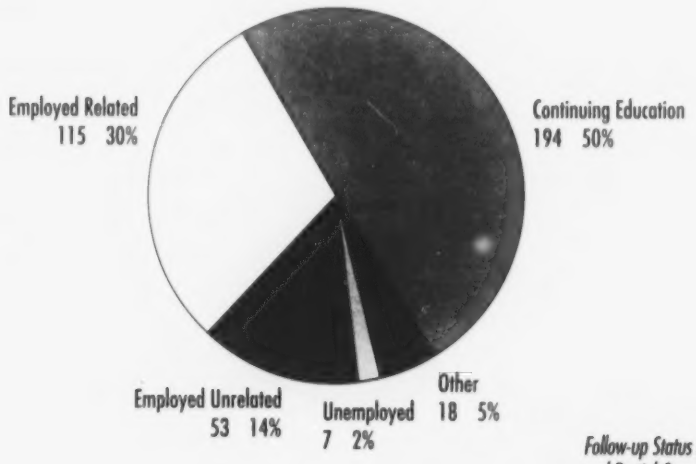
AGRICULTURE

AGRICULTURE EDUCATION consists of training in agriculture occupations, including production agriculture, supplies and services, mechanics, ornamental horticulture, forestry, and agricultural resources. Production agriculture and ornamental horticulture are the two primary programs offered at the secondary school level, while the other areas are integrated into these programs. An increasing emphasis is being given to farm and ranch management and agribusiness. Vocational agricultural education is usually a four-year program in Colorado high schools. Of the total high school students, 1.6 percent are involved in vocational agricultural education. This is comparable to 6.5 percent of the labor force engaged in agriculture in Colorado. Colorado ranks 14th nationally in cash receipts from farm marketings, outranked in the west only by California. Ninety-six percent of those seeking employment found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	2,103	2,057	2,427
COMPLETERS	399	377	487
FTE ENROLLMENT	472.37	475.20	556.98
NUMBER OF PROGRAMS	79	79	83
TOTAL COST OF PROGRAMS	$3,355,534	$3,625,468	$3,943,030
COST PER FTE	$7,104	$7,629	$7,079

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Agricultural Power Machinery	2	19	9.99	$98,571	$9,867
Animal Health	1	24	10.62	$78,710	$7,411
Ornamental Horticulture	7	252	77.26	$526,892	$6,820
Production Agriculture	72	2,102	446.40	$3,145,546	$7,046
Wildlife Management	1	30	12.71	$93,311	$7,342

Figure 1



Follow-up Status of Colorado 1990 Secondary Agricultural Education Program Completers and Partial Completers. (N=387. 34 unknowns were excluded from the chart).

BUSINESS

BUSINESS EDUCATION is the largest vocational program area in Colorado with consistently high enrollments in the areas of administrative assistant, accounting, data processing, and management trainee. The curriculum in business education follows a flexible program concept. Several occupational options are included under the secondary core program providing opportunities that are related to student interests and job market demands. Colorado is a major center for business, finance, government, and corporate headquarters, with a high number of positions in the office business area. For all business education programs, 93 percent of those seeking employment found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	12,899	11,581	17,161
COMPLETERS	3,610	3,478	3,809
FTE ENROLLMENT	2,457.38	2,299.48	2,943.87
NUMBER OF PROGRAMS	232	224	226
TOTAL COST OF PROGRAMS	$15,553,250	$15,730,343	$16,007,593
COST PER FTE	$6,329	$6,841	$5,438

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Accounting, Bookkeeping	2	17	8.71	$102,441	$11,761
Bus. Admin. Support	2	6	4.00	$15,588	$3,897
Clerical	1	33	6.75	$28,769	$4,262
Data Processing/ Info. Processing	7	217	65.89	$367,525	$5,578
Data Programing	1	3	.50	$1,133	$2,266
Secretarial & Related	213	16,885	2,858.02	$15,492,137	$5,421

Figure 1

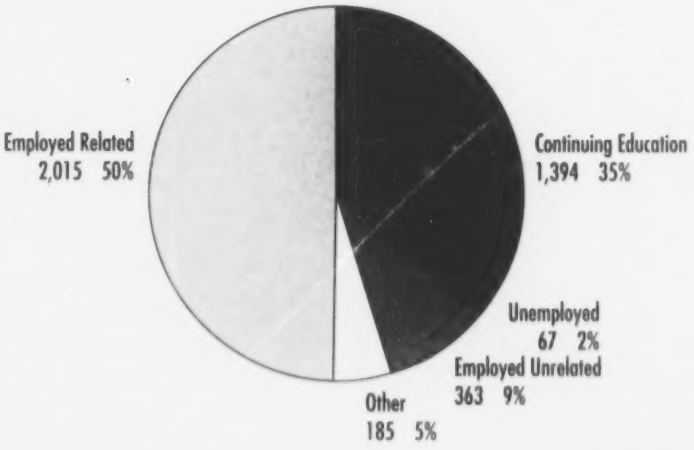
Follow-up Status of Colorado 1990 Secondary Business Education Program Completers and Partial Completers. (N=4,119. 696 unknowns were excluded from the chart.)

CONSUMER AND HOMEMAKING EDUCATION

The CONSUMER and HOMEMAKING program is designed to equip students with entry-level skills needed for the occupation of homemaker. This program is based upon a job analysis study of the Colorado homemaker. Instruction focuses on four careers: life management, relationships, parenting education, and teen health. One hundred percent of completers of the program are placed related to training in the occupation of homemaker/balancing work and family.

	1988-89	1989-90	1990-91
ENROLLMENT	9,129	8,609	10,089
COMPLETERS	**3,581**	**3,228**	**3,412**
FTE ENROLLMENT	1,038.65	982.66	1,125.34
NUMBER OF PROGRAMS	**161**	**166**	**165**
TOTAL COST OF PROGRAMS	$3,474,687	$3,875,079	$4,178,752
COST PER FTE	**$3,345**	**$3,943**	**$3,713**

Figure 1



Follow-up Status of Colorado 1990 Secondary Consumer and Homemaking Occupations Program Completers and Partial Completers. (N= 4,024. 425 unknowns were excluded from the chart.)

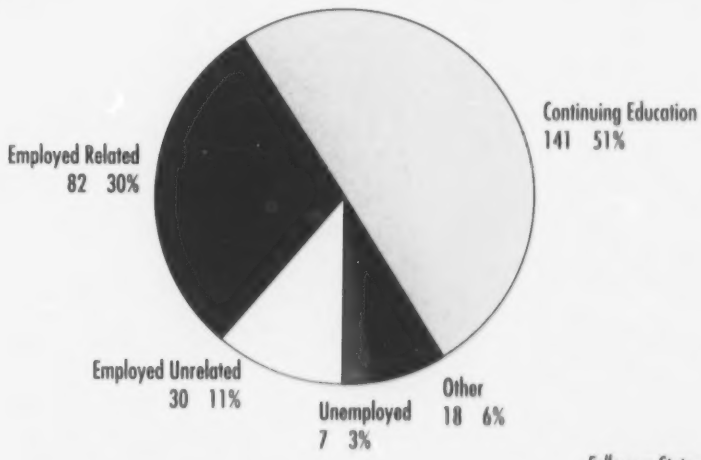
HEALTH OCCUPATIONS

HEALTH OCCUPATIONS EDUCATION has undergone a transition as the number of geriatric patients has increased and as technology has increasingly interfaced with this area of human services. The health team is still the basic component of our medical and dental care systems. Health occupations education trains students for over 40 different health occupations. Among those offered at the secondary level are nurse assistant/orderly, home health aide, medical office aide, physical therapy aide, veterinary aide, and dental aide. Aides in the health occupations work not only in hospitals, doctor's offices, and dental offices, but also in nursing homes, patients' homes, public health departments, clinics and medical laboratories. The demand for health care personnel in Colorado has exceeded the supply of personnel, especially in rural areas of the state. Ninety-four percent of those seeking employment found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	471	421	475
COMPLETERS	332	285	327
FTE ENROLLMENT	167.65	151.67	178.15
NUMBER OF PROGRAMS	28	28	25
TOTAL COST OF PROGRAMS	$1,058,394	$999,118	$1,173,729
COST PER FTE	$6,313	$6,587	$6,588

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Allied Health	13	324	118.32	$721,927	$6,101
Dental Assisting	5	62	27.79	$245,078	$8,819
Medical Assisting	1	1	2.67	$20,065	7,515
Nursing Asst	4	38	8.99	$72,015	$8,011
Ophthalmic Services	1	9	6.51	$45,209	$6,945
Physical Therapy Aide	1	41	13.87	$69,435	$5,006

Figure 1



Follow-up Status of Colorado 1990 Secondary Health Occupations Program Completers and Partial Completers. (N= 278. 49 unknowns were excluded from the chart.)

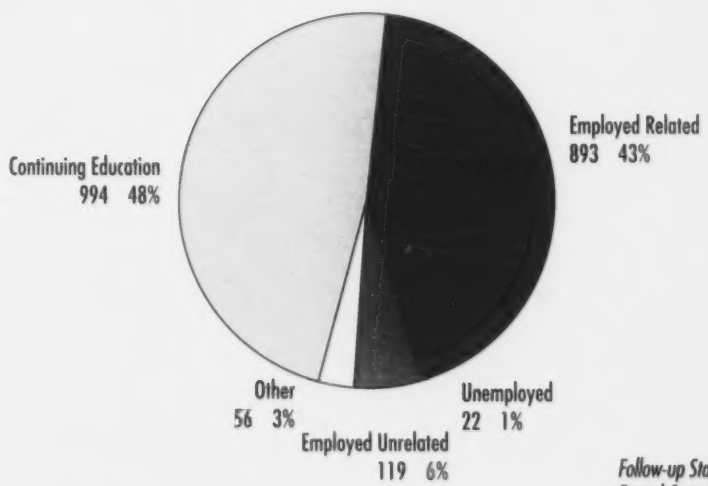
MARKETING

MARKETING EDUCATION is a cooperative vocational education program in which schools and employers combine to develop competent workers in marketing and distribution of goods and services. The program offers opportunities to gain first-hand experience in fashion merchandising, advertising, general marketing, finance and credit, travel and tourism, transportation, distribution, and international marketing including merchandising and sales in these areas. The more diverse opportunities are in the urban areas but the job demand for marketing occupations is statewide. This vocational education program is vital to Colorado's wholesale, retail, and service-based economy. Of those seeking employment, 98 percent found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	4,704	4,653	5,269
COMPLETERS	1,680	1,732	1,708
FTE ENROLLMENT	924.22	763.98	809.66
NUMBER OF PROGRAMS	77	80	81
TOTAL COST OF PROGRAMS	$3,569,645	$3,885,097	$3,961,755
COST PER FTE	$3,862	$5,085	$4,893

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Marketing Education	78	5,204	777.09	$3,698,251	$4,759
Marketing Management	1	21	7.21	$67,671	$9,386
Tourism	1	19	11.69	$115,331	$9,866
Travel Services Marketing	1	25	13.67	$80,502	$5,889

Figure 1



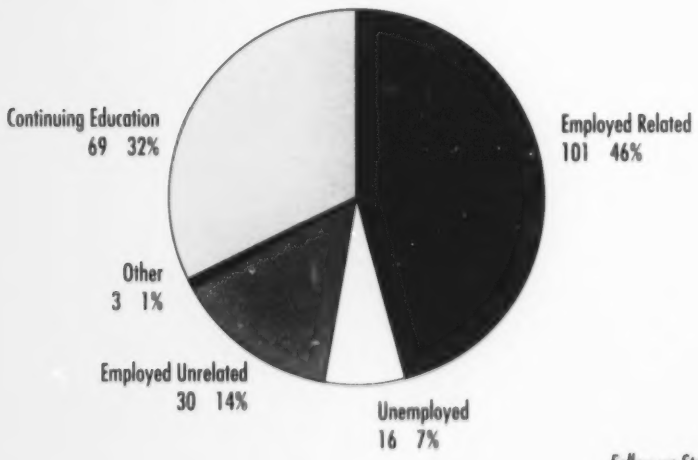
Follow-up Status of Colorado 1990 Secondary Marketing Program Completers and Partial Completers. (N= 2,084. 351 unknowns were excluded from the chart.)

MULTI-OCCUPATIONAL COOPERATIVE EDUCATION

MULTI-OCCUPATIONAL COOPERATIVE EDUCATION programs are cooperative vocational education programs which offer training opportunities in a diversified range of occupations. The program is offered in small high schools that do not have sufficient enrollment to justify a specialized vocational education program. The range of occupations served through this training vehicle may include agriculture, business, health, home economics, marketing, technical, and trades and industry. Because the program is cooperative in nature, it is responsive to the local economy and job environment of the local area. Those students completing this program who sought employment have experienced a high rate of success (69 percent) in finding employment in jobs related to their training. Eighty-nine percent of the multi-occupational students seeking employment found jobs.

	1988-89	1989-90	1990-91
ENROLLMENT	295	362	453
COMPLETERS	141	179	242
FTE ENROLLMENT	57.35	60.16	103.00
NUMBER OF PROGRAMS	12	16	21
TOTAL COST OF PROGRAMS	$312,134	$337,019	$512,488
COST PER FTE	$5,443	$5,602	$4,976

Figure 1



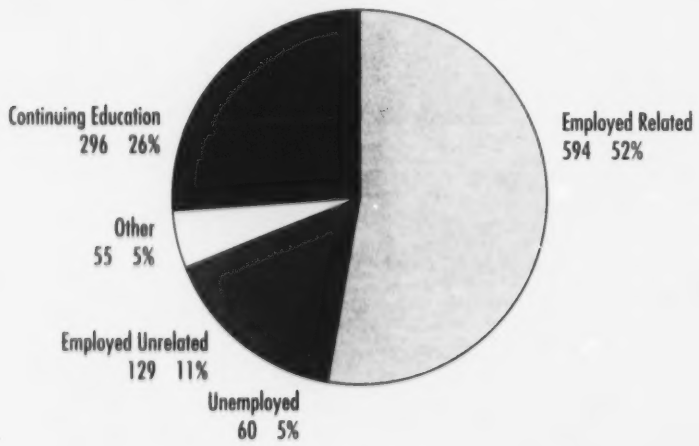
Follow-up Status of Colorado 1990 Secondary Multi-Occupational Program Completers and Partial Completers. (N = 219. 36 unknowns were excluded from the chart.)

ALTERNATIVE COOPERATIVE EDUCATION

ALTERNATIVE COOPERATIVE EDUCATION is designed to provide students who are disadvangtaged and/or disabled with entry level job skills to enter the Colorado labor force. The program is designed to accommodate the student with special needs. These special programs place students on the job at a pre-determined local business training station, under a training plan agreed upon by the student, employer, parent and coordinator. Related classroom instruction is provided to meet the individual needs of the student. The coordinator of the program works closely with the employer and the student to assure success on the job. Although general youth unemployment statistics are high for these populations, these programs have succeeded in achieving a highly credible job-related employment rate (76 percent). Of those alternative cooperative education students who were seeking employment, 92 percent found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	2,127	2,340	4,150
COMPLETERS	637	657	1,030
FTE ENROLLMENT	317.47	321.94	461.04
NUMBER OF PROGRAMS	44	53	94
TOTAL COST OF PROGRAMS	$1,704,216	$2,084,183	$3,263,392
COST PER FTE	$5,368	$6,474	$7,078

Figure 1



Follow-up Status of Colorado 1990 Alternative Cooperative Program Completers and Partial Completers. (N = 1134. 204 unknowns were excluded from the chart.)

TECHNICAL

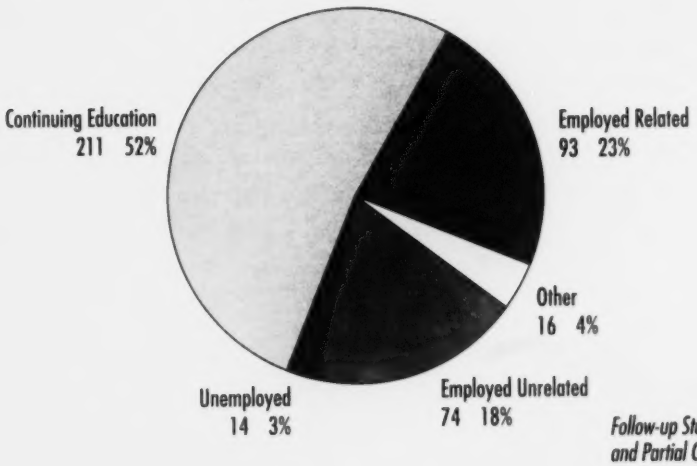
TECHNICAL EDUCATION programs provide training in an array of rapidly changing, high technology occupations such as electronics technician and computer-assisted drafting technician. Drafting, electronics, and radio and television repair are the areas of primary emphasis at the secondary level but there are other programs offered in areas where the demand for the particular training exists such as instrumentation technology, radio and TV broadcasting, air conditioning, and heating and refrigeration. These programs support Colorado's high technology industry development. The percentage of technical program completers who are employed related to their training is relatively low because a high proportion of the students enrolled in these programs continue their education at the postsecondary level. Students in technical education programs who were seeking employment had a 92 percent success rate in securing jobs.

	1988-89	1989-90	1990-91
ENROLLMENT	1,229	947	1,011
COMPLETERS	382	326	338
FTE ENROLLMENT	385.11	341.31	369.85
NUMBER OF PROGRAMS	64	57	71
TOTAL COST OF PROGRAMS	$2,132,654	$2,204,453	$2,373,334
COST PER FTE	$5,538	$6,459	$6,417

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Air Conditioning	3	18	7.09	$50,859	$7,173
Architectural Design & Const.	1	6	2.34	$16,645	$7,113
Communications Electronics	7	116	38.95	$326,238	$8,376
Computer Electronics	1	7	17.97	$50,610	$2,816
Criminal Justice	3	57	25.70	$101,999	$3,969
Drafting & Design Technology	18	342	124.73	$869,762	$6,973
Electronic Technology	19	246	92.55	$553,520	$5,981
Engineering Related Technology	15	170	41.49	$259,851	$6,263
Instrumentation Technology	2	1	.22	$3,036*	$13,800
Radio/Television Production/ Broadcasting	2	48	18.81	$140,814	$7,486

**New program start-up costs*

Figure 1



Follow-up Status of Colorado 1990 Secondary Technical Education Program Completers and Partial Completers. (N = 408. 33 unknowns were excluded from the chart.)

TRADES AND INDUSTRY

VOCATIONAL TRADES AND INDUSTRIAL EDUCATION has the most diversified program base, offering a broad spectrum of programs tailored to the needs of students and of industry. Students develop manipulative skills, acquire technical knowledge, learn proper safety practices, and utilize facilities and equipment comparable to those in the work place. The programs emphasize realistic training which parallels industry standards and technologic advances. The distribution of jobs in Colorado's labor market indicates that construction, manufacturing, and trades account for 25 percent of the non-agricultural labor force. Since trade and industrial education cuts across many sectors of Colorado's economy, it is vital to the over-all economic development of the state and provides vocational students with a significant advantage in obtaining entry level employment. Close to 93 percent of the trades and industrial students who were seeking employment found a job.

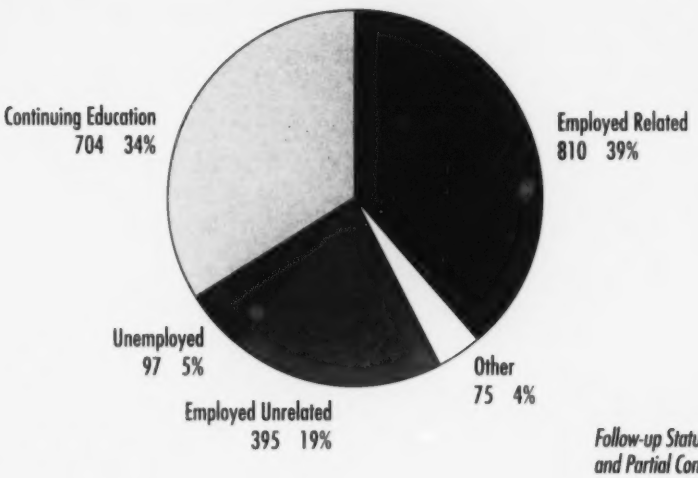
	1988-89	1989-90	1990-91
ENROLLMENT	6,746	5,576	5,495
COMPLETERS	1,966	1,752	1,626
FTE ENROLLMENT	2,404.44	1,996.88	2,010.78
NUMBER OF PROGRAMS	269	262	270
TOTAL COST OF PROGRAMS	$13,110,069	$13,103,681	$12,852,830
COST PER FTE	$5,452	$6,562	$6,392

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Aircraft Mechanics	1	2	3.78	$8,569	$2,267
Auto Body and Repair	15	456	175.90	$1,079,073	$6.135
Auto Mechanics	67	1,665	586.42	$3,483,788	$5,941
Cabinetmaking	4	12	4.01	$83,482*	$20,818**
Carpentry	13	193	71.25	$625,336	$8,777
Commercial Art	7	251	87.70	$484,005	$5,519
Commerical Photograp hy	3	104	37.43	$254,385	$6,796
Construction Trades	25	428	117.36	$929,442	$7,920
Cosmetology	20	527	336.90	$1,419,895	$4,215
Drafting, General	1	4	1.50	$24,830	$16,553**
Electrician	3	10	8.12	$61,523	$7,577
Electromechanical Instr. Maintenance	3	128	38.50	$222,696	$5,784
Graphic Printing & Communication	18	298	107.29	$985,789	$9,188
Diesel Mechanics	4	38	27.90	$120,862	$4,332
Industrial Coop Education	18	55	69.37	$536,916	$7,740
Industrial equipment Maintenance & Repair	5	21	7.05	$121,508	$17,235**
Major Appliance Repair	2	2	11.30	$37,599	$3,327
Machine Shop	18	219	94.59	$687,116	$7,264
Masonary/ Bricklaying	4	44	19.63	$194,091	$9,887
Mechanics & Repairers, Other	1	25	3.25	$39,314	$12,097**
Shoe & Boot Repair	1	3	.47	$1,065	$2,266
Small Engine Repair	3	45	21.83	$184,874	$8,469
Typesetting	1	1	1.12	$20,113	$17,958**
Upholstery	1	29	10.31	$90,981	$8,825
Vehicle/Mobile Equipment Repair	2	44	10.25	$50,125	$4,890
Welding	30	391	157.55	$1,105,453	$7,017

** Includes some new program start-up costs.*

*** High cost programs are closely monitored.*

Figure 1



Follow-up Status of Colorado 1990 Secondary Trade and Industry Program Completers and Partial Completers. (N = 2,081. 303 unknowns were excluded from the chart.)

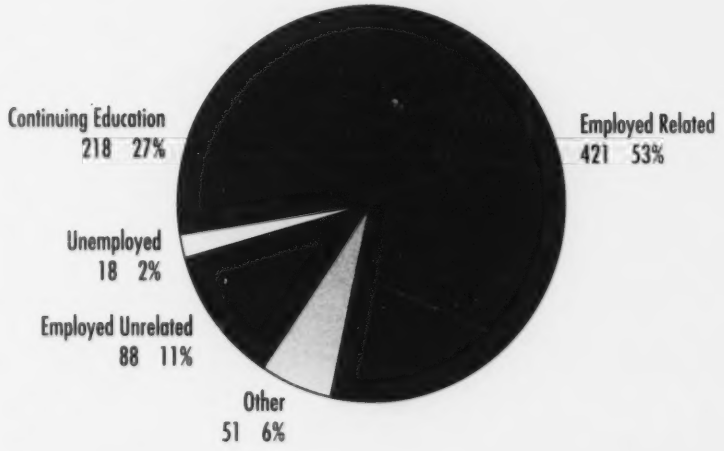
WAGE EARNING HOME ECONOMICS OCCUPATIONS, FOOD SERVICE, AND EARLY CHILDHOOD EDUCATION

HOME ECONOMICS OCCUPATIONS, FOOD SERVICE, AND EARLY CHILDHOOD EDUCATION prepare students for employment in child care, food services, institutional and commercial housekeeping, home furnishings, personal services, and clothing technical services. Inherent in home economics is the commitment to stay abreast of the advancements of technology so that the skills being taught are relevant in today's world. Population growth, rising incomes, and more leisure time have contributed to a growing demand for food service personnel and commercial housekeeping personnel. The percentages of students placed in jobs related to their training in the wage-earning program is impressive, as job demand remains high. With the increase in the number of women entering the workforce or heading single parent households, the demand for child care services has increased. Of those in wage earning home economics who were seeking employment, 97 percent found a job.

	1988-89	1989-90	1990-91
ENROLLMENT	1,967	1,572	1,662
COMPLETERS	1,021	725	747
FTE ENROLLMENT	434.84	358.04	352.75
NUMBER OF PROGRAMS	59	61	63
TOTAL COST OF PROGRAMS	$2,593,464	$2,574,127	$2,565,532
COST PER FTE	$5,964	$7,189	$7,273

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs ($)	Cost Per FTE ($)
Care & Guidance Mgmt. & Svc.	2	19	7.76	$81,947	$10,560
Child Care Aide	5	191	55.13	$367,963	$6,674
Child Care Management	3	27	14.50	$83,151	$5,735
Food Management Production Service	13	346	109.13	$1,093,606	$10,021
Vocational Home Economics	40	1,079	166.23	$938,865	$5,648

Figure 1



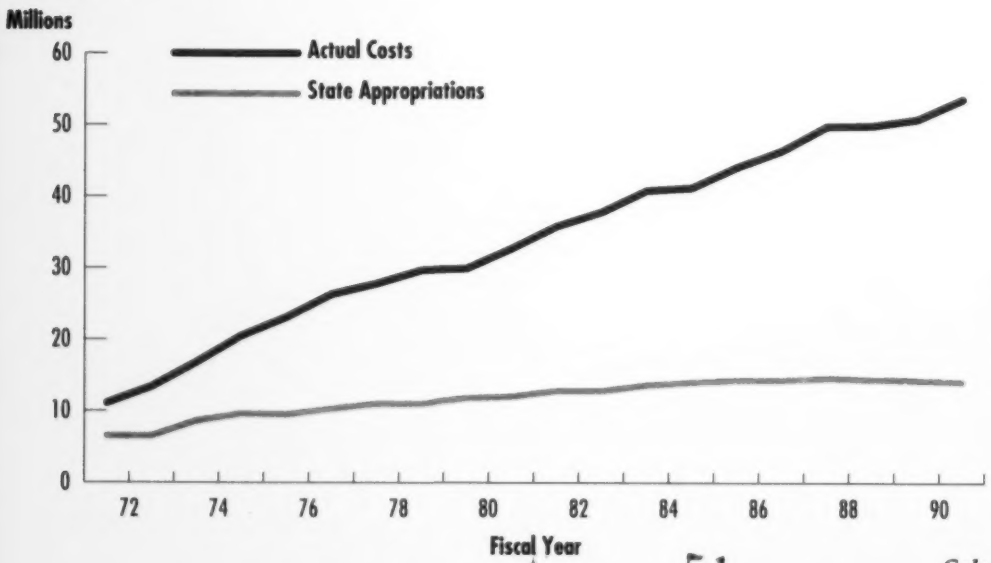
Follow-up Status of Colorado 1990 Secondary Home Economics Occupations Program Completers and Partial Completers. (N = 796. 116 unknowns were excluded from the chart.)

APPROPRIATIONS

The Appropriations for the Colorado Vocational Act reflect moderate increases in the fiscal years since 1971. The increases in appropriations, however, have not kept pace with increasing costs of operating vocational education programs. Therefore, the proportion of state support of the total cost of the program operation reflects a steady decline, while the local contribution shows a corresponding increase. In 1990-91, program operation costs were $53,568,906 compared to the 1989-1990 amount of $50,834,645, a 5.4 percent increase in costs. State support increased by 0.1 percent.

FISCAL YEAR	CVA ACTUAL COST	STATE SUPPORT FUNDING	PERCENTAGE
1971-72	$11,160,434	$6,500,000	58.24
1972-73	13,391,725	6,500,000	48.54
1973-74	16,788,834	8,600,000	51.22
1974-75	20,475,475	9,620,000	46.98
1975-76	23,132,088	9,538,200	41.23
1976-77	26,289,575	10,303,696	39.19
1977-78	27,784,458	11,004,354	39.61
1978-79	29,677,929	10,997,128	37.05
1979-80	29,965,435	11,766,926	39.27
1980-81	32,651,304	11,966,122	36.65
1981-82	35,808,522	12,768,357	35.66
1982-83	37,817,246	12,788,295	33.79
1983-84	40,822,618	13,560,640	34.01
1984-85	41,209,437	14,053,569	34.10
1985-86	44,070,066	14,323,398	32.50
1986-87	46,404,834	14,279,071	30.76
1987-88	49,837,325	14,565,338	29.23
1988-89	49,897,054	14,399,570[1]	28.86
1989-90	50,834,645	14,266,581[2]	28.12
1990-91	53,568,906	14,274,855[3]	26.65

Figure 1



[1] Excludes $502,846 which was transferred to Colorado Department of Education for transportation expenses.
[2] Includes $299,663 which was transferred to Colorado Department of Education for School Finance Act buyouts.
[3] Includes $209,803 which was transferred to CDE for School Finance Act buyouts.

All data reported in this document pertain to Colorado Vocational Act Programs only.

Sources:

Research and Planning Division, CCCOES

1988-89, 1989-90, 1990-91	Financial System
1988-89, 1989-90	Student Accounting System
1988-89, 1989-90	Follow-up/Placement Report
1989, 1990	Colorado Vocational Act Report

Planning and Evaluation Division
Colorado Department of Education

Division of Employment Statistics
Colorado Department of Labor

U.S. Department of Labor
Washington, D.C.
U.S. Department of Commerece
Washington, D.C.

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